What's the outlook on heat pumps in 2023?





Increased capacity

Boosted by new legislative developments at the EU level, the replacement rate of boilers is increasing rapidly, and just over half of the EU's 2030 CO2 reduction target can be reached by fully implementing heat pumps. To deliver on this, we've allocated more than 500.000 additional UPM3/UPM4 units in 2023, and an additional 1 million units in 2024. We have also allocated an additional 300.000 UPML and UPMXL units.

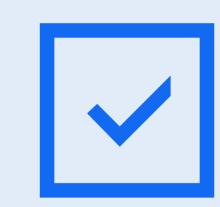
Improved delivery

We're now able to offer a 4-week order confirmation freeze and we are able to move production lines between plants to maximise our capacity. We have also ensured 1-3year supplier commitments to ensure material supply – and we continue to work to

After some years of uncertainty and turbulence, 2023 is already looking to offer a lot of growth opportunities – especially with heat pumps in higher demand than ever. Here's how Grundfos has prepared for the year and is tapping into the growth potential together with key partners.

In position to tap into an accelerating green energy transition

For the last few years, markets and supply chains around the world have been disrupted, impacting access to supplies and products. But things are finally looking up, and the green energy transition is accelerating across the world.



become an even more reliable supplier.

Improved quality

Quality is always key for Grundfos. To improve our already superior quality, we have started to have more frequent meetings to encourage open dialogue about quality. We are using Pareto to eliminate quality issues, and we use dedicated quality engineers to support at the local level. We are also exploring the possibility of using virtual reality for pump analysis. With 49 ppm on line returns, we're currently at an all-time low, and we strive towards our 2025 goal of 9 ppm.

Take Back programme

We are scaling our <u>Take Back programme</u> as we aim to become a more circular business. Our ambition is to reuse components from end-of-life circulators into new products without compromising quality. The components that Grundfos uses to produce pumps have a significantly greater resource value than the raw materials needed to produce them. Therefore, we can achieve even higher environmental savings compared to conventional recycling. One of our main targets is to recover 500.000kg through the programme, and we continue to collaborate with many of our

That's good news for the planet – but it's good news that comes with added complexity.

The energy transition needs to be supported by the right solutions. And one of those solutions is heat pumps. With the Green Deal, the EU aims to reduce CO2 emissions by 55% by 2030 – and more than half of this can be reached by fully deploying heat pumps. This is increasing the demand for heat pumps and hybrid pump solutions, and we've been working hard to prepare for this over the previous years.



partners to achieve our ambitions.

Heat pump integration

We have been working to redefine our integrated vision based on the current heat pump market, moving from a one-size-fits-all solution to a customisable modules approach. We're using a product family master plan to analyse complete heat pump portfolios. We're already getting positive responses to this, with customers expecting to be able to save up to 20% of their production costs with an integrated Grundfos solution.

5 key initiatives that will lead the way in 2023

Our supply chain is now back to full efficiency, and we're ready to deliver even more pumps and parts than ever before. To help further accelerate and get to an even better position than pre-Covid, we have been working on five initiatives at Grundfos HVAC OEM:

